! TECHNICAL GUIDE #9 !

TARGETING: PRINCIPLES AND PRACTICE

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1. INTRODUCTION[1]

Targeting lies at the heart of attempts to reach the poorest of the poor. But targeting is not nearly as straightforward as is often suggested. Indeed, it is possible that a targeted intervention will be more costly, and less effective, than one made available to all households or that is randomly allocated. For this reason, it is important that development practitioners have a good understanding of the principles and practice of targeting.

This guide outlines operational methodologies that will improve the targeting of rural development projects. It begins by considering the *principles* underlying targeting. It argues that targeting should never be undertaken for its own sake. Rather, it should be assessed against a benchmark, such as the impact on reducing the severity of food insecurity. It is important to recognize that targeting is not costless. Targeting is effective only when the benefits associated with *additional* reductions in food insecurity outweigh the *additional* costs associated with doing so. The guide then considers the *practice* of targeting. It is argued that there is a strong case for geographical targeting. However, regional rankings can be very sensitive to the criteria used in the identification process. By contrast, the case for household targeting is considerably weaker.

Project controllers and others interested in reading about these topics in more detail are advised to consult Besley and Kanbur (1993); Grosh (1994); Haddad, Sullivan, and Kennedy (1992); and Subbarao (1997).

2. THE PRINCIPLES OF TARGETING

Defining the Objective

Many development agencies seek to improve household food security, often defined as adequate access to food at all times, throughout the year and from year to year. Suppose this general definition is specified more narrowly. Specifically, a person is food-secure if the number of calories available for her to eat exceeds her requirements. If caloric availability is less than nutritional requirements, she is described as food insecure. Accordingly, it is tempting to assume

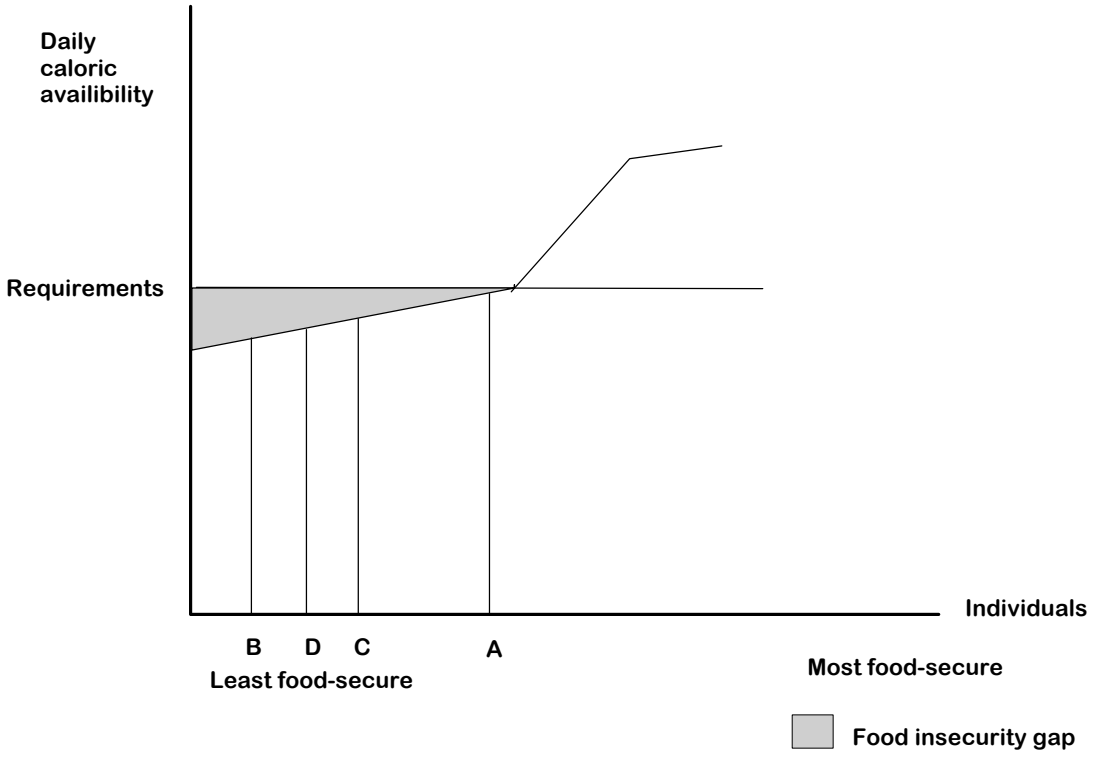
[1] Funding for data collection and analysis of these data has been supported by the International Fund for Agricultural Development (TA Grant No. 301-IFPRI). We gratefully acknowledge this funding, but stress that ideas and opinions presented here are our responsibility and should, in no way, be attributed to IFAD.

that the objective of targeting is to produce the greatest decrease in the percentage of individuals who are food insecure.

Unfortunately, matters are not quite so simple. Consider Figure 1. The horizontal axis is ranking of individuals from least to most food secure. The vertical axis shows individual caloric availability; the horizontal line indicating requirements. Note that the number of calories available to person A is just below her requirements whereas caloric availability for person B is significantly below requirements. Suppose enough calories were 'transferred' from the B to A so that A can now meet her requirements. The measure of food insecurity—percentage insecure—would register an improvement, even though the poorest person has been made worse off. It is not obvious that this is what is intended when interventions are being designed to reduce food insecurity.

An alternative way of measuring food insecurity might be in terms of a food insecurity gap. This can be thought of as the total amount of increase in food security needed to eliminate food

Figure 1 Stylized distribution of food security



insecurity among all food-insecure households. In the example above, this would be calculated by adding up the caloric shortfalls of all individuals for whom availability was less than requirements—the shaded area in Figure 1. This measure signals the folly of using the percentage measure. In the example above, although percentage of food-insecure individuals falls, the food insecurity gap would increase. However, consider a second example. The number of calories available to person C is below her requirements; caloric availability for person D is even lower than C's. 'Transferring' a small amount of calories from D to C causes both individuals to remain food insecure. The percentage measure would remain unchanged as would the food insecurity gap. However, the most food-insecure person is now even more food insecure and this is not being captured in either measure. One way of resolving this would be to apply more weight to a reduction in food insecurity among the most food-insecure individuals. Such a measure explicitly emphasizes the severity of food insecurity.

Now consider the following formula:

$$P(\alpha) = (1/n)\sum_{i=1}^{q} [(z - y_i)/z]^{a},$$

where n is the number of individuals; y_i is the measure of food security for the ith person; z represents the cut-off between food security and insecurity (expressed here in terms of caloric requirements); q is the number of food-insecure individuals; and α is the weight attached to the severity of food insecurity.

Giving no weight to the severity of food insecurity is equivalent to assuming that $\alpha = 0$. The formula collapses to $P(0) = q / n$, or the percentage measure.

Giving equal weight to the severity of food insecurity among all food-insecure households is equivalent to assuming that $\alpha = 1$. Summing the numerator gives the food insecurity gap; dividing this by z expresses this figure as a ratio.

Giving more weight to the severity of food insecurity among the most food-insecure households is equivalent to assuming that $\alpha > 1$. A common approach in the poverty literature is to set $\alpha = 2$, yielding

$$P(2) = (1/n)\sum_{i=1}^{q} [(z - y_i)/z]^{2}.$$

Although this formula is fairly straightforward, it can look a little intimidating for some one who has not used it before. For this reason, it is helpful to work through the following example (Table 1). Consider caloric availability for five people. Caloric requirements are assumed to be 2,200 calories per day.

Table 1 Data for worked example calculating P0, P1, and P2

Person	Daily caloric availability	Food insecure (Yes/No)	Food insecurity gap (if food-insecure: requirement - availability)	Severity of food insecurity (if food-insecure, equals gap squared)
1	2,325	No (=0)	0	0
2	1,900	Yes (=1)	2,200 - 1,900 = 300	90,000
3	2,100	Yes (=1)	100	10,000
4	1,700	Yes (=1)	500	250,000
5	2,100	No (=0)	0	0
Sum		3	900	350000

Recall that the formula is

$$P(\alpha) = (1/n)\sum_{i=1}^{q} [(z - y_i)/z]^{a},$$

where n is the number of individuals; y_i is the measure of food security for the ith person; z represents the cut-off between food security and insecurity; q is the number of food-insecure individuals; and α is the weight attached to the severity of food insecurity.

Here, there are three food-insecure people, so P0 (percentage of food-insecure people) = 3/5 = 0.6. The food insecurity gap, P1, is (1/5) (900/2,200) = 0.08. Finally, the severity of food insecurity, P2, is (1/5) $(900/2,200)^2$ = 0.03.

Which measure should be used when considering the impact of targeting an intervention so as to reduce poverty or food insecurity? If the objective is merely to reduce the percentage of poor, or food-insecure people, than P(0) is the correct measure. If the objective is to reach out to

the poorest of the poor, then P(2) is the correct metric. An agnostic approach is to present both measures.

The Benefits and Costs of Targeting

The basic case for targeting is tantalizingly simple. As above, food security is defined in terms of their being enough calories available for individuals to satisfy their requirements. Using survey data, food acquisition is graphed, ordering the sample from worst to best-off. This initial ordering is represented by a dashed line in both panels of Figure 2. In the left-hand panel, a uniform transfer of calories of amount *z* is given to every person. By doing so, every person meets their minimum caloric requirements. In the right-hand panel, anyone with caloric consumption less than *z* is given a transfer sufficiently large so as to bring their initial consumption plus transfer up to minimum requirements. This achieves the same objective but at far less cost. The uniform transfer is plagued by two sources of excessive expenditure: leakages to the nonpoor (represented by the black quadrilateral); and payments to the poor in excess of their needs (represented by the empty triangle).

The case for targeting is complicated by several factors. First, targeting is not costless—it imposes administrative costs that reduce the amount of money available for the actual intervention. These costs will vary with the degree, or fineness, of targeting. One might imagine that there are certain fixed costs associated with targeting. Initial targeting, say, on the basis of geography, may be relatively costless (Technical Guide #2—Food and Nutrition Security Data on the World Wide Web—is one source.) As targeting moves below a certain geographical level (say the district) to villages to households, and to individuals, it becomes increasingly costly. Second, when interventions are targeted, there is the very real possibility that some food-insecure households will be missed and some food-secure households will benefit. This can be described as errors of inclusion and exclusion. An *error of inclusion* is one in which an intervention reaches individuals who were not intended to be beneficiaries. An *error of exclusion* occurs when intended beneficiaries are not able or permitted to participate in the intervention. Table 2 provides an illustration of this.

Figure 2 The benefits of targeting

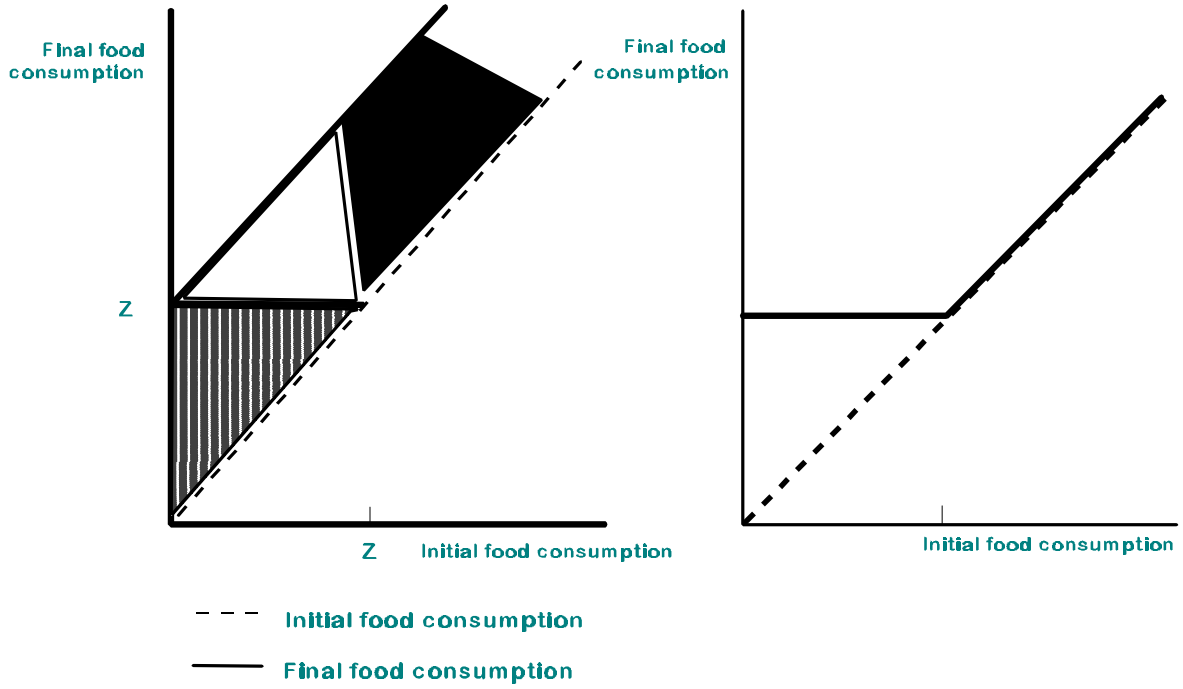


Table 2 Errors of inclusion and exclusion

	Food insecure	Food secure	
Participate in intervention	Success 45	Inclusion error 20	65
Do not participate	Exclusion error 15	Success 20	35
	60	40	100

There are four groups in Table 2. There are food-insecure households who participate in the intervention and food-secure households who do not participate. Both groups are indicative of successful targeting. The food secure who participate, 20 percent of the population, are counted as an error of inclusion. The food insecure who do not participate, 15 percent of the population, are counted as an error of exclusion.

An alternative way of looking at this phenomenon involves calculating *leakage* and *undercoverage* rates. Leakage is calculated by looking at program participants—those found in the top row of Table 2. The number of food-secure beneficiaries is divided by the total number of participants—20/65, yielding a leakage rate of about 30 percent. Undercoverage is calculated by looking at those who should be participants in the intervention but are not—those found the bottom left-hand cell of Table 2—relative to the total number of potential beneficiaries. The number appearing in the bottom left-hand cell is divided by the total number of food-insecure households—15/60, yielding an undercoverage rate of 25 percent.

All other things being equal, lower leakage (inclusion error) is preferable to higher leakage. Lower undercoverage (exclusion error) is preferable to higher exclusion error. Why do these errors exist? Some undercoverage may be due to factors such as lack of knowledge that the intervention exists or the presence of constraints (say catastrophic illness or sudden death, which reduces household labor supply) that make it impossible for an eligible household to participate. Some eligible households may decide that the benefits associated with participation do not outweigh the costs associated with doing so. Some leakage may occur due to faulty project design or implementation.

Two additional factors that affect leakage and undercoverage rates are the indicators used to screen participants and the resources available to fund participation. In order to focus solely on these, suppose that none of the reasons for inclusion or exclusion listed above are applicable. There are 100 households in the sample of which 33 are food insecure (Table 3). Consider, as a baseline, a scenario in which there are enough resources to provide this intervention to exactly 33 households. In the absence of any further information on these households, participation is by random draw.

Leakage is 67 percent (22/33) as is undercoverage. In fact, leakage is constant no matter how many households participate. Undercoverage falls monotonically from 100 percent—when all households are excluded—to zero when all households are included.

Now consider the case where we can target on the basis of an indicator that perfectly captures household food security. This generates Table 4. Here, both errors of inclusion and exclusion are zero as are the measures of leakage and undercoverage. Now suppose all households are permitted to participate. Undercoverage remains at zero, but leakage would rise

Table 3 Errors of inclusion and exclusion under random draw

	Food insecure	Food secure	
Participate in intervention	Success 11	Inclusion error 22	33
Do not participate	Exclusion error 22	Success 45	67
	33	67	100

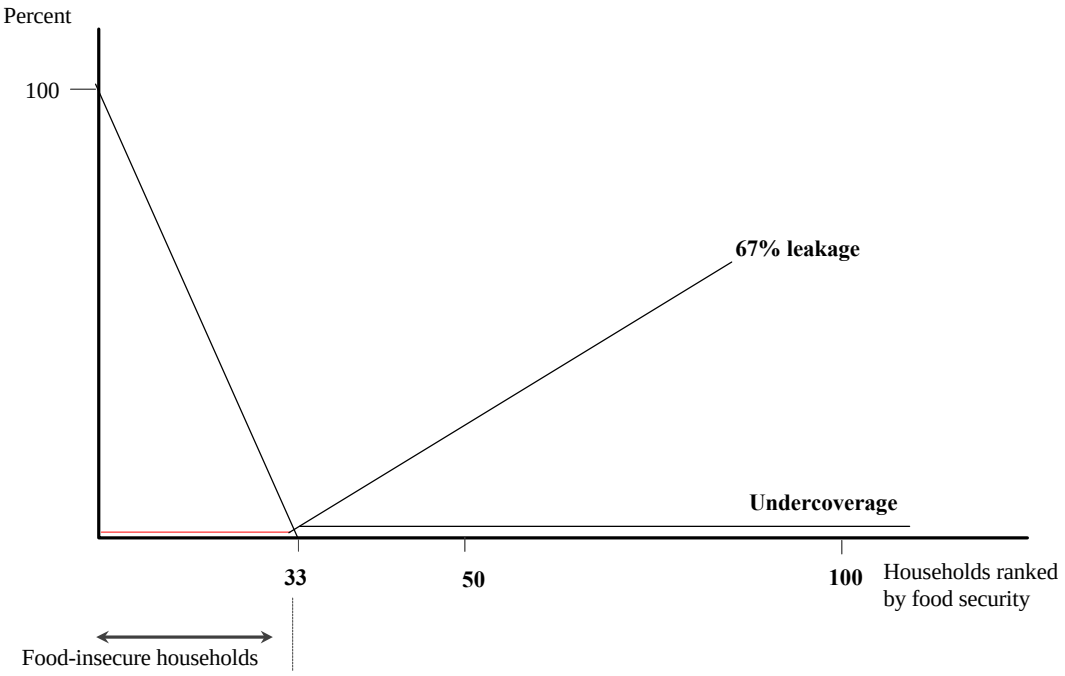
Table 4 Errors of inclusion and exclusion under perfect targeting

	Food Insecure	Food Secure	
Participate in intervention	Success 33	Inclusion error 0	33
Do not participate	Exclusion error 0	Success 67	67
	33	67	100

to 67 percent. Conversely, if no household were permitted to participate, leakage would be zero, but undercoverage would rise to 100 percent.

Figure 3 shows the leakage and undercoverage rates as the number of households permitted to participate in the intervention is varied, under the assumption that an indicator is available that identifies without any errors food-secure and -insecure households. The horizontal axis is based on this perfect indicator of household food security. It ranks households on the basis of their degree of food security relative to the total population. Moving from left to right is associated with increasing household food security. Relative to the median household, denoted by '50', all households to the left have lower degrees of food security, all households to the right have higher degrees of food security. Recall that 33 percent of the population are food insecure. The vertical axis measures percentage errors associated with leakage and undercoverage. Now

Figure 3 Leakage and undercoverage with perfect targeting



suppose the bottom third of households, as ranked by this indicator, are targeted. Undercoverage falls as we move from 0 to 33, and is zero when 33 or more households participate in the intervention. Leakage is zero when 33 or fewer households are selected for the intervention, rising to 67 percent when no one is excluded.

Now consider the rather extreme example whereby the indicator classifies all food-secure households as insecure and all insecure households as secure. As in the previous scenario, if all households were excluded, leakage would be zero and undercoverage 100 percent. If everyone were included, leakage would be 67 percent and undercoverage zero. If only the bottom third of households were permitted to participate in this intervention, even though none of them are food insecure, the table of errors of inclusion and exclusion would appear as below (Table 5).

Undercoverage is 100 percent of food-insecure households. Undercoverage rates only begin to fall once we double the number of participants. By definition, leakage is zero where there are no participants. It jumps to 100 percent if only one (food-secure) household participates

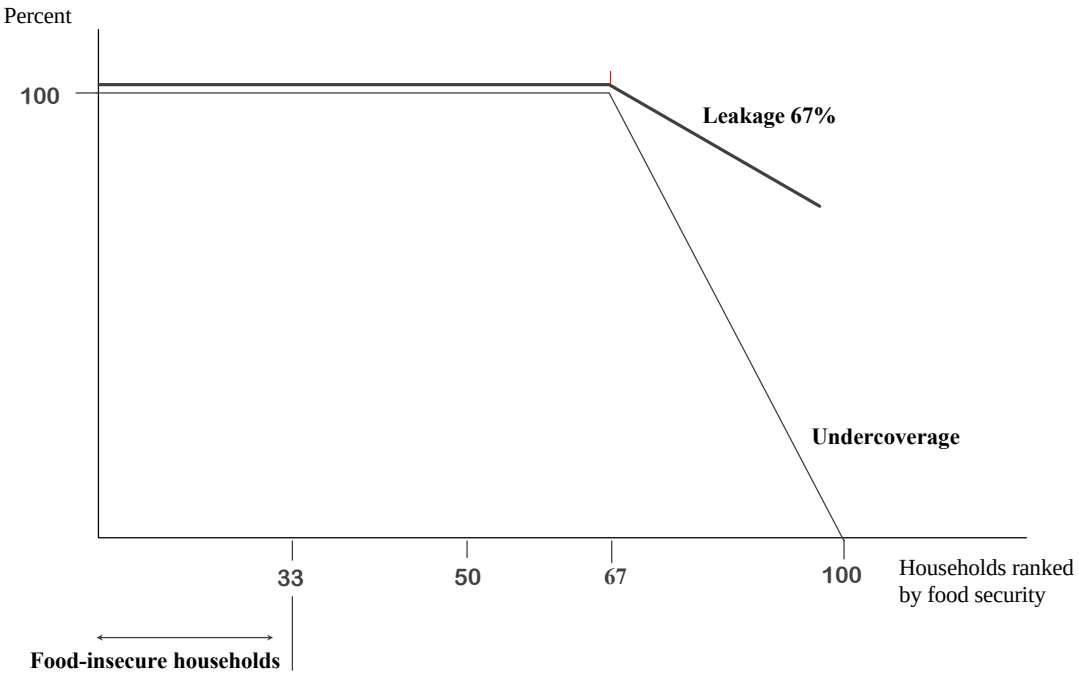
Table 5 Errors of inclusion and exclusion under 'worst case' targeting

	Food insecure	Food secure	
Participate in intervention	Success 0	Inclusion error 33	33
Do not participate	Exclusion error 33	Success 34	67
	33	67	100

in the intervention and remains at that rate until the 68th household is enrolled in the intervention. This is shown in Figure 4.

The purpose of these examples is to illustrate a simple point: bad targeting has the potential to produce worse outcomes than no targeting at all. It also tempts the project controller to think of targeting issues in terms of the trade-offs between leakage and undercoverage. Consider a more realistic case in which an imperfect indicator of household food security is available. Reducing the number of beneficiaries will reduce leakage, but at the cost of increased

Figure 4 Leakage and undercoverage under 'worst case' targeting



undercoverage. How should one assess the trade-off between these? One might be tempted to assume that the objective should be to minimize the sum of leakage and undercoverage, but this is incorrect. Such an objective implicitly measures the success of targeting not in terms of its impact on poverty, but instead on the identity of the recipients. In the literature on the targeting of social programs, where the greatest priority is to improve the welfare of the poor, reducing undercoverage is more important than minimizing leakage. If the priority is to conserve limited budget funds, measures to reduce leakage are given greater weight.

For project staff, the objective of targeting should be seen as the maximization of the reduction in food insecurity, given a fixed budget constraint. The example below develops this further.

An Extended Example

One development project is ongoing in the Zone Lacustre region of Mali, an area with very high levels of food insecurity. A major component of the project is the improvement of irrigation facilities so as to better capture water emanating from the annual flooding of the Niger River. By doing so, the project seeks to increase yields of sorghum and rice and to stabilize these yields across years.

As part of this TAG, IFPRI surveyed 275 households in the Zone Lacustre. These households reside in 10 villages that are grouped geographically into three areas. Data from the first survey round, collected at the height of the hungry season, indicates that food insecurity is a significant problem. Across all households, caloric availability per person per day was 2,100. Approximately 69 percent of individuals were not obtaining their minimum calorie requirements of 2,200 calories per day.

Would the food security impact of this project by improved by targeting areas, villages, or households within this region? Answering this question requires an assumption regarding the nature of the intervention. Here, it is assumed that the resources of the project are sufficient to increase the availability of sorghum by 23 kilograms per year for every person in the sample. After taking into account processing, this is equivalent to increasing caloric availability by 100 calories per day. It is further assumed that if this intervention were made available to only half the households in this sample, (approximately) twice the amount of sorghum would be available

to each person. That is, it is assumed that no costs are incurred in identifying recipient households. Nor does the cost of the intervention vary with the number of participants. These assumptions are made in order to keep the budget for the intervention fixed. They are relaxed later in the example.

Suppose that no targeting took place. Every household and every person benefits from the intervention with the result that daily per capita caloric availability rises by 100 calories. This will be called a universal intervention. Table 6 summarizes its impact. By definition, undercoverage is zero (everyone food-insecure person is a participant) and leakage will be 31 percent (every food-secure person is also a participant). The percentage of food-insecure people—the P0 measure—falls by about 2.5 percent. The measure of the severity of food insecurity falls by 15 percent, from 0.157 to 0.132. An alternative to this base case is to assume that households are randomly selected to participate in this intervention. Assuming that one out of every fourth household is selected this way makes it possible to increase the impact of the intervention on each individual to 320 calories per day. This is called the random intervention. Leakage is exactly the same as under the universal intervention. Since households are selected randomly, one would expect that 31 percent of the participants would be food-secure and this is precisely what is observed. Undercoverage is 69 percent. Recall that it measures the proportion of individuals who the intervention fails to cover. Given that only 25 percent of households are participants, it is not surprising that undercoverage is much higher under a random intervention than under the universal intervention. But note that the impact on the percentage and severity of food insecurity is *virtually identical* under either. The intuition for this can be found by going back to Figure 1. Although everyone participates under the universal intervention, the benefits to participation are relatively small. Consequently, only those whose existing caloric availability is close to requirements are lifted out of food insecurity. The random intervention, although affecting only a smaller number of individuals, has a larger impact and therefore can pull individuals with lower existing caloric availability out of food insecurity.

Now suppose the intervention is targeted to the *area* where average daily per person caloric availability is the lowest. Even though each person is now receiving three and a half times the amount of calories when compared to a universal intervention, it performs no better in terms of reducing the percentage or severity of food insecurity. By contrast, targeting the four

Table 6 The impact of alternative targeting mechanisms on the percentage and severity of food insecurity

	Preintervention	No Targeting		Equal allocation to all persons in the most food-insecure area	Equal allocation to all persons in the four most food-insecure villages
		Equal Allocation to all households	Equal allocation to a random selected 25 percent of all households		
Number of households		275	69	74	63
Number of individuals		1601	500	470	401
Effect of intervention (expressed in terms of increased daily caloric acquisition)		100 calories per person per day	320 calories per person per day	340 calories per person per day	400 calories per person per day
Leakage		31 percent	31 percent	32 percent	8 percent
Undercoverage		0 percent	69 percent	71 percent	67 percent
P0 (Percentage of food-insecure people)	0.694	0.677	0.672	0.685	0.654
P1 (Food insecurity gap)	0.291	0.260	0.262	0.261	0.252
P2 (Severity of food insecurity	0.157	0.132	0.133	0.132	0.126

most food-insecure *villages* generates a slightly better impact on the percentage measure. The P2, or severity measure, is significantly improved, falling 20 percent from the preintervention case.

These results come about for the following reason. The most food-insecure area has three villages. One is the most food-insecure village in the sample, the other two are about average. As a result, when targeting this sector, much of the intervention is "wasted" in the sense that benefits go to individuals who are not food insecure. Targeting the poorest four villages does not produce a much greater impact on the percentage measure because so many people are so far below their requirements. However, it is for exactly this reason that the impact on the severity measure is much higher.

Based on this information, should the intervention be made universally available, allocated randomly or targeted? It is at this point that the costs of targeting, which up to now have been assumed to be zero, become important. Suppose there is a fixed cost associated with providing this intervention to each household. If this were the case, the random intervention is to be preferred over the universal intervention. Either produces the same impact on all measures of food insecurity, but the random allocation will do so more cheaply. Note that the random allocation is preferable, even though the rate of undercoverage is much higher. It is not clear whether the random allocation is preferable to one targeted to the most food-insecure area. Both have comparable rates of leakage and undercoverage, both produce equal reductions in the percentage and severity measures, and both reach about the same number of households. Targeting would only be preferable if the costs associated with obtaining the data necessary to target are more than offset by the possibility that providing the intervention in only one area was cheaper than spreading across an equal number of households scattered over the Zone Lacustre. The case for targeting by village is slightly stronger. Although this might be more costly than targeting the poorest area, it requires reaching a smaller number of households and yields a much larger reduction in the severity of food insecurity. If the savings associated with working in only four villages instead of working with slightly more households spread out over the entire Zone outweigh the costs of collecting the information necessary to target, then this form of targeting would be preferable on the basis of its improved impact on the severity of food insecurity.

3. THE PRACTICE OF TARGETING

In this section, we assume that there are gains associated with targeting, either in terms of reducing the cost of providing the intervention or in terms of increasing the impact on food security. The next issue to consider is how to target interventions. Broadly speaking, interventions can be administratively targeted or self-targeted. We review these approaches in turn.

Administratively Targeted Interventions

Administratively targeted interventions are those in which project staff determine who will participate. Eligibility is based on a set of criteria. Administrative targeting can be further subdivided into indicator-based targeting and means testing.

Indicator-based targeting begins by recognizing that means testing may be very costly and may not be entirely accurate. It assumes that there is an identifiable characteristic or set of characteristics that are correlated with, say, food insecurity or poverty. Data on these characteristics are assumed to be relatively easy to obtain. An obvious indicator for project staff to use is geography. Geographical targeting works best when food security differs across regions but is similar within regions. The within-region homogeneity aspect is one that sometimes goes unappreciated. If subregions exhibit great variations in their degree of food insecurity, one risks siting an intervention in a relatively well-off area within a larger, poorer one. For this reason, geographic targeting works best when the geographic units are relatively small districts as opposed to provinces, counties as opposed to states, and so on. Geographic targeting is also attractive on the grounds that it is easier and less expensive to administer. Further, as the example in the previous section illustrated, concentrating resources on fewer units (districts, villages, or households) can have a larger impact on food insecurity.

It is also important to be clear on the criteria used to target geographically. Does attempting to reach the poorest of the poor mean (1) siting interventions where the percentage of food-insecure households is highest (that is, targeting on *percentage* (P0) measure described in Section 2); (2) siting interventions where there are many food-insecure people (that is, targeting on *absolute numbers*—sometimes expressed on a density basis); or (3) siting interventions based

on the extent of food insecurity among the food insecure (that is, targeting on *severity*, the P2 measure described in Section 2)? These different measures will not necessarily yield the same rankings. Again, the Zone Lacustre data can be used to illustrate this. Using the same definition of food security as in Section 2 (caloric availability relative to requirements), each village is ranked according to these criteria. The rankings are in descending order of insecurity: a 1 means that the village is the most insecure according to this criteria; a 10 means that it is the most food-secure.

A particularly notable village in Table 7 is Gouaty. Based on the criteria developed in Section 2, 95 percent of individuals living in this village are food insecure. However, Gouaty is the smallest village in the study. Consequently, it fares poorly when ranked in terms of absolute numbers.

Suppose funding was only sufficient to provide the development intervention in three villages. Using percentage of food insecure as the criterion, these would be Gouaty, Angira, and Hamakoira. Using absolute numbers, they would be N'goro, Ouaki, and Tomba. Using severity, they would be Angira, Tomba, and Hamakoira. Note that no two rankings produce an identical list of villages.

In the example considered above, villages are ranked on the basis of a single criterion. In practice, project staff may have access to multiple indicators on poverty and household food security. In these circumstances, it is possible to develop a "targeting algorithm"—a statistical method that assigns weights to the relative importance of each indicator. The Appendix presents an example of such an algorithm that was applied to a development project in Côte d'Ivoire. These algorithms are also discussed in Technical Guide #7.

Targeting at the household level can be done on the basis of indicators (using the algorithm method described above) or means testing. Under means testing, the project obtains information on every potential participant and based on this information and the criteria for participation, a person is either selected or not selected. A range of methods are available to do this. These are described in Table 8.

Table 7 Ranking 10 Zone Lacustre villages by percentage, absolute numbers, and severity of food insecurity

	Criteria		
Village	Percentage	Absolute Numbers	Severity
Aldianabangou	9=	6	5=
Tomba	6	3	2=
Hamakoira	2=	5	2=
Mangourou	8	7	10
Gouaty	1	8=	4
N'goro	5	1	8
Tomi	4	8=	9
Goundam Touskel	9=	10	5=
Ouaki	7	2	5=
Angira	2=	4	1

Table 8 Household targeting mechanisms

Mechanism	Advantages	Disadvantages	Administrative requirements
Community-based identification			
Community identifies food-insecure households, for example by using group informant rating (see Technical Guide #6).	Simple Inexpensive	Communities have incentive to overstate degree of food insecurity. ∴ triangulation is needed. Need relatively skilled staff to undertake PRA activity Since community rankings are relative to community measures, may lead to inconsistencies in terms of access to interventions across communities.	Staff to conduct PRA activities Record keeping
Household self-reported status			
Household reports level of food security, for example, by reporting changes in composition, frequency, and size of meals relative to norm.	Simple Inexpensive	Inaccurate Households have enormous incentive to lie, especially when no triangulating information is collected.	Staff to conduct interviews Record keeping
Measured food security status			
Household food security is measured, for example, via direct observation, 24-hour or 7-day recall. Additional data are collected to adjust for household size, seasonality and to triangulate measured food security.	Accurate Difficult for households to offer deceptive information	Expensive Lengthy	Staff to conduct longer interviews Staff to enter and analyze data Detailed data entry and record keeping

(continued)

Table 8 Continued

Mechanism	Advantages	Disadvantages	Administrative requirements
Proxy measure of food security			
A synthetic food security score is calculated on the basis of a set of easily collected indicators of food security, e.g., household size, gender of head, diversity of diet, etc. Score can be calculated on-site or computer.	Weighting algorithm ensures uniformity in assessment across communities. Not clear to households how to deceive effectively	Requires longer interview than self-reported status, but shorter than measured food security Weighting algorithm is inflexible and may not detect special circumstances, e.g., natural disasters. May be seen as arbitrary if communities and households do not understand weighting algorithm	Staff to conduct interviews Detailed record keeping Computerized option requires data entry capacity. Software design can be centralized. Previous analytical work and periodic updates to establish proxy variables and weights
Fieldworker assessment of food security			
Subjectively assess same information collected under proxy measurement	Can detect special circumstances	Uniformity and consistency across and within communities hard to maintain May be perceived as open to favoritism, bribery	Staff conduct interviews Record keeping
Nutritional status			
Anthropometry (see Technical Guide #5)	Objective, verifiable, accurate indication of need	Nutritional status is an outcome of several factors of which food security is only one ∴ targeting interventions based on this measure may not be appropriate. Unclear how households without small children will be assessed Requires specialist staff to make measurements	Specialized staff Computerized analysis of data

Source: Adapted from Grosh (1994).

There are several common problems that affect virtually all methods of targeting of individuals or households. First, indicators of well-being will move over time in response to both transitory and secular, or permanent, phenomena. Targeting on the basis of information collected at a single point in time may include households that are no longer food insecure and miss households that have fallen into food insecurity. Second, the marginality of poor and food-insecure households manifests itself in many ways, including geographic inaccessibility. Household-level targeting, therefore, will require an aggressive effort to seek out the poorest members of any community.

A further problem is the incentive that individuals and communities have to misrepresent themselves in order to increase the likelihood that they will be selected for an intervention. This was brought home to the IFPRI team rather dramatically as part of participatory rapid appraisal (PRA) work it undertook in the Zone Lacustre. One component of these exercises was a group rating activity (see Technical Guide #6). In one village, we began this activity by asking the community to provide a local definition of food security. Based on the definition that was eventually agreed upon, we then asked the community to classify households into one of three groups: always food insecure; sometimes food insecure; never food secure. After a brief discussion, we were told that all households in this village were always food insecure. We queried this remark as our household survey work had indicated to us a certain degree of economic differentiation within this village. Although many households were poor, the household-level data on crop production and livestock indicated that this was not the case for all households. After a protracted discussion, it emerged that these villagers had assumed—despite our frequent denials—that we would use this information as a targeting mechanism, and hence were at pains to disavow any admission of food security in their village.

One can readily imagine such deception—which is carried out for entirely understandable reasons—also occurring when households or individuals are the unit of response. Where targeting is on the basis of characteristics, for example, possession of consumer durables, households will have an incentive to hide these. If the indicator is household size, households will have an incentive to amalgamate. One solution to this difficulty is to not reveal the criteria used to select households. But this solution runs counter to the notion of transparency and participation that underlie the interventions of many development agencies. An alternative

solution is the use of an objective measure such as child anthropometry. But, as is discussed further in Technical Guide #5, this is not always appropriate. For example, it excludes households with no children.

Finally, it is worth noting that communities may resist the notion of household or individual targeting. Such an approach might be seen as creating or exacerbating social tensions within villages. The selection of individual households can place local staff in an awkward position, caught between the demands of households to be included and more senior staff who demand adherence to specified targeting criteria.

Self-Targeting

An alternative to administratively targeting interventions is self-targeting. Under self-targeting, the intervention is, in principle, available to anyone who wishes to take part. However, it is designed in such a way that it is only attractive to poorer households. The classic example is that of public works programs that pay a subsistence wage. In the context of most development interventions, examples of self-targeting could include tying the intervention to some time commitment on the part of households. For example, only households who provide labor to a public works program, who attend meetings with agricultural extension workers or with local health staff, would be eligible to receive a package of interventions such as credit and seeds. The assumption here is that the time costs—in terms of foregone earnings—would be such that only poorer households would want to participate. Alternatively, the intervention could be designed in such a way as to focuse on crops or livestock that are especially important for poor people. Research on improved varieties of cassava is an excellent example as it is a crop consumed primarily by the poor. Self-targeting can also be seen as a means of reaching particular household members such as women. For example, the intervention could be focused on crops grown only by women (though careful design must be undertaken to ensure that these are not then appropriated by men).

Self-targeting requires particularly careful project design. Poorly self-targeted interventions may be attractive to no one, not even the poor. This could occur, for example, where there is no demand for the intervention or where the costs of participation outweigh the benefits. Information on the design of these interventions can be obtained through participatory

appraisal techniques, such as the conceptual mapping of threats to food security and SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis. These are described in Technical Guide #6.

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